DOCUMENT RESUME

ED 318 937 CG 022 483

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TITLE Women's Sex-role Self-Concept: A Study of Career Choice and Satisfaction.
PUB DATE 24 Oct 89
NOTE 33p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Career Choice; Congruence (Psychology); *Females; Graduate Students; Higher Education; Nontraditional Occupations; *Satisfaction; *Self Concept; *Sex Role

ABSTRACT

This study was conducted to examine sex role characteristics common to women making nontraditional career choice; to determine whether dissatisfaction is affected by congruence of sex role, self-concept, and traditionally of program; and to investigate whether sex role self-concept plays a role in women's ratings of satisfaction within their graduate programs of study. Subjects were 111 female graduate students enrolled in either traditional (developmental and child psychology, counseling psychology) or nontraditional (law, engineering) programs. Subjects completed a consent form, an academic data sheet, a 9-point Likert measure of satisfaction, and the Bem Sex Role Inventory (BSRI). Data analysis revealed no significant difference in satisfaction ratings for individuals whose career choice was congruent to their sex role versus individuals who did not display congruence. Significant differences were found in satisfaction ratings among the four sex role categories and female-dominant versus male-dominant programs of study. There was higher satisfaction of the masculine-androgynous group as opposed to the feminine-undifferentiated group across traditional and nontraditional programs and within nontraditional programs. The masculine-androgynous group within the nontraditional program was the only group for which congruence of sex role and program was of significance. (NB)

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Womens' Sex-role Self-Concept
A Study of Career Choice and Satisfaction

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October 24, 1989

CG 022483

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Abstract

Researchers surveyed 111 female graduate students enrolled in both female-dominant and male-dominant programs. Data analysis revealed no significant difference in satisfaction ratings for individuals whose career choice is congruent to their sex role versus individuals who do not display congruence. Significant differences were found in satisfaction ratings among the 4 sex role categories and female-dominant vs male-dominant programs of study.

INTRODUCTION AND PROBLEM

As early as the 1950's, Parsons (1951) and Parsons and Bales (1955) introduced a functional explanation of gender roles linked to power. The concepts developed to describe the worlds of men and women were labeled "instrumental" and "expressive," and over thirty years later, as Gibbs (1985) states, "The concepts have stood the test of time as few ideas in the social sciences have" (p. 145). Yet, these concepts have undergone much debate as instrumental and expressive apply to sex roles and the world of work.

Background of the Problem

With the women's movement in the early 1970's, a new era of sex role research was introduced. Due to the influx of women seeking "equality" in the work force, the areas of sex role stereotyping and women's work roles were subject to much investigation. The overrepresentation of women in lower-level occupations was as clear in the early 1970's as it is now, in the late 1980's. Helping, nurturing, and assisting have been found at the core of these lower-level occupations, and characterize descriptions of the feminine sex role stereotype (Hughes, Martinek, & Fitzgerald, 1985). The majority (70%) of women in higher-level, professional occupations are still concentrated in those occupations traditionally considered feminine such as teaching, nursing, and social work (Stockton, Berry, Shepson, & Utz, 1980). Shinar (19750 reports that once participation in an occupation becomes associated with a particular sex, that sex and its standard of behavior become salient features of that occupation.

This segregation of the sexes in traditionally feminine and masculine occupations has long outlived its usefulness as it encourages maintaining the status quo rather than making career decisions based on an internal self awareness. Current career development theory clearly contradicts making

decisions from an external frame of reference. Super's (1953) theory clearly states that career choice is an implementation of a person's self concept. Therefore, career choice, at its best, is an internally directed process. At the core of this internal process is a factor which shapes the psychological functioning of a person, the view of self as a man or woman (Cook, 1985). As Korman (1966) states, "The choosing of a certain set of social roles, such as that involved in vocational choice, and the rejecting of others is dependent on the characteristics which one attributes to oneself, on either a conscious or unconscious level" (p. 479). It is evident that as vocational choice represents an attempt to implement one's self concept, sex role self concept is an important variable which may differentiate women pursuing traditional and nontraditional careers.

Statement of the Problem

The vast majority of previous research investigating women's sex role self concepts and traditional versus nontraditional career choices has focused on undergraduate students' choices of majors. Findings have been contradictory (Stockton, Berry, Shepson, & Utz, 1989; Yanico, Hardin, & McLaughlin, 1978; Harren, Kass, Tinsley, & Moreland, 1978; Moreland, Harren, Krimsley-Montague, & Tinsley, 1979; Millard, Habler, & List, 1984). The lack of consistency may partially be due to undergraduates', especially freshmen and sophomores', lack of commitment to their initial choice of a major which frequently changes several times before the student receives a degree. There is a need for research examining these variables with an adult population invested in the choice of a career.

Purpose of Study

This study aims to provide data on an adult, female population committed to their career choice, namely, women graduate students. The interaction of three primary variables was investigated: 1) sex role self concept; 2) traditionality of choice; and 3) satisfaction within the chosen field of study. The studey was designed to address the following objectives:

1) What sex role characteristics are common to women making nontraditional career choices.

2) Whether satisfaction is affected by congruence of sex role self concept and traditionality of program.

3) Whether sex role self concept plays a role in women's ratings of satisfaction within their graduate programs of study.

Results will contribute to a better understanding of the role graduate education may play in maintaining an imbalance of men and women in sex-typed occupations.

METHOD

Overview

The segregation of the work force into two distinct spheres defined primarily by gender has created concern as to the breadth of women's career choices. Women dominate the "caring" occupations traditionally classified as feminine which are associated with less status, less pay, and less opportunity for advancement than the male dominated "industrial" occupations. Though there are opportunities for women within the nontraditional sphere, women continue to make choices which perpetuate the division. This study was designed to identy characteristics of women who tend to enter graduate training in traditional versus nontraditional fields of study and to examine the

relationship between sex roles and satisfaction within these training programs.

Subjects

Students from four graduate programs at the University of Kansas were selected to participate in the study as a result of a telephone poll conducted to identify graduate programs which enroll a disproportionate number of male or female students. The following programs were selected and labeled as traditional or nontraditional:

Traditional: More than 60% Female

Developmental and Child Psychology, Ph.D.; 62%F

Counseling Psychology, M.S.E.; 75%F

Nontraditional: Less than 40% Female

Law, J.D.; 35%F

Engineering, Ph.D; 10%F

Department chairpersons were contacted to identify resources from which participants could be obtained. In all departments except for Counseling Psychology a roster of students was available which differenntiated male and female students. All women engineering and developmental psychology students were contacted by mail and asked to participate. A random sample of women law students were contacted by mail. Counseling psychology students were contacted through professors. Table 1 outlines the number of particpants contacted and the number who agreed to participate within each department.

The final sample consists of 111 subjects yielding a return rate of 59.0%. The sample consists solely of women graduate students. The median age of nontraditional sample is 25.75 with a range of 22 to 50 while the median age of the traditional sample is 31.75 with a range of 21 to 53.

Procedure

Subjects who had been identified by the rosters were mailed packets of information which included four items: 1) a letter of appreciateion; 2) a consent form; 3) an academic data sheet; and 4) the Bem Sex Role Inventory (BSRI; Bem, 1974).

Subjects were asked to complete the materials enclosed in the packet and return them in the postage paid envelope. Students names were marked off the rosters as their packets came in. After thrity days, those who had not yet returned their packets were mailed follow-up postcards.

Measurement of the Independent Variable

The independent variable, occupational choice, was represented by graduate program; engineering and law were defined as stereotypically sex-typed masculine fields of study while developmental and counseling psycyology were defined as stereotypically sex-typed feminine fields of study. Occupational sex role stereotyping is objectively based on a comparative frequency of females and males within a occupational field (Feather & Simon, 1978; Shinar, 1978). In the graduate population sampled, the percentage of female students within each department is outlined under "subjects."

Measurement of Dependent Variables

Sex Role Self Concept. The Bem Sex Role Inventory (BSRI; Bem, 1974) was used to assess the dependent variable of sex role self concept. The BSRI is a self administered inventory designed to measure psychological androgyny. The format is a self descriptive adjective checklist containing 60 characteristics which are classified into 20 feminine traits (e.g. cheerful, loyal, gentle, compassionate), 20 masculine traits (e.g. dominant, aggressive, self-reliant, ambitious), and 20 neutral filler items (happy, conscientious, conventional, friendly). Individuals respond on a 7-point Likert scale

indicating how well each of the characteristics describe themself. The scale ranges from 1 ("Never or almosst never true") to 7 (:Always or almost always true") and is labeled at each point.

Subjects' scored into one of four sex role self concept classifications. To begin this classification subjects' masculininty and femininity scores were calculated. A subject's femininity score is the mean of that subject's ratings on the feminine adjectives, and that subject's masculininity score is the mean of his or her ratings of the masculine adjectives.

Following calculation these raw scores were converted to standard scores and were classified into one of the four categories using the median split procedure described by Bem (1981) based on the Standford normative sample (F median=51; M median=50). Androgynous classification requires scores above median F and median M. An undifferentiated classification requires scores below median F and median M. A feminine classification requires a score above median F and a score below median M, and a masculine classification requires a score below median F and a score above medain M.

Appropriate methods for establishing the reliability of the BSRI are test-retest and internal consistency. Pearson product moment correlations have been calculated with an interval of four weeks. Coefficients range from .76 to .94. Results suggest consistency over the period of one month. Internal consistency coefficients range from .75 to .90. These results indicate that the items which comprise the scales of the BSRI are conssitent within themselves.

Satisfaction. A 9-point Likert scale as used by Harren, Kass, and Moreland (1979) was included as a measure of the subject's satisfaction with her program of study. Subjects were asked to indicate how satisfied they had been with their program of study by circling a number from 1 (Extremely Dissatisfied) to 9 (Extremely Satisfied). Every other point was labeled.

Other Variables. An "Academic Data Sheet" was completed by each subject. Information obtained included the following three factors: 1) age; 2) ethnicity; and 3) school, department, date of entry, and degree sought.

Hypothesis Testing

The following null hypotheses were tested:

1. The relative frequency of undifferentiated, feminine, androgynous, and masculine sex roles is the same for women in traditional and nontraditional graduate programs of study.
2. There is no significant difference between satisfaction ratings for indviduals whose sex roles are congruent with their programs and those who do not display congruence.
3. There is no significant difference in satisfaction ratings among women classified as undifferentiated, feminine, androgynous, or masculine in either the traditional or nontraditional programs.

Data Analysis

Hypotheses were tested using three statistical procedures. Hypothesis 1 required the used of chi square analyses. Hypothesis 2 was tested through the use of t-tests of independent means, and Hypothesis 3 required further t-tests along with several one-way analysis of variance procedures.

Summary

This study investigated the influence of sex role self concept on women graduate students' choices of traditional versus nontraditional programs of study. It further investigated the relationship between sex role self concept, traditionality of program, and satisfaction ratings.

RESULTS

The purpose of this study was to investigate the relationsh between sex role self concept, occupational choice, and satisfaction within a chosen field of

study for women graduate students. It was also designed to ascertain characteristics common to women making nontraditional career choices.

The Bem Sex Role Inventory (Bem, 1974) was used to assess sex role, and a nine-point Likert scale as used by Haarren, Kass, and Moreland (1979) was used to assess satisfaction.

One hundred eleven subjects from four different graduate programs participated in the study. A demographic outline of the subjects' characteristics is provided in Table 2. Fifty-eight percent of the sample represented students in traditional programs such as developmental and counseling psychology while 42% of the sample represented students in nontraditional programs such as law and engineering. The mean age of the traditional sample ($Xx=32.3$) differed significantly from the mean age of the nontraditional sample ($x=28.5$), $t=3.986$, $p<.001$. The mean number of semesters in attendance also varied significantly between the traditional and nontraditional areas, $t=2.08$, $p<.05$. There was also a significant difference within the traditional programs, $t=5.025$, $p<.001$, and the nontraditional programs, $t=2.29$, $p<.05$. Six percent of the sample represented racial groups other than Caucasion: 2.8% were Hispanic; 1.8% were Black; and 1.8% were classified as other.

HYPOTHESIS I

The following null hypothesis was tested:

> There exists no significant difference in the relative frequency of masculine, feminine, androgynous, and undifferentiated sex roles for women in traditional or nontraditional programs of study.

A chi square analysis was performed to determine whether there were overall sex role frequency differences between the two gorups, traditional

versus nontraditional. See Table 3. Results indicate a significant difference between the two groups in the distribution of individuals within each sex role category, $X2(9)=20.156$, $p<.001$.

A chi square ananlysis of the distribution of feminine and masculine subjects in both groups was also significant, $X2(1)=6.73$, $p<.01$. There was a greater number of masculine women in nontraditional programs than in traditional programs, and a greater number of feminine women were in traditional programs as opposed to nontraditional program.

In addition, a chi square analysis also revealed a significant difference between the number of androgynous women and the number of undifferentiated women in the two programs, $X2(1)=11.64$, $p<.001$. There was a greater number of androgynous women in traditional programs than nontraditional programs, and a greater number of undifferentiated women were in nontraditional as opposed to traditional programs.

Results led to the rjection of the null hypothesis. There is a significant difference in the relative frequency of masculine, feminine, androgynous, and undifferentiated women in traditional and nontraditional programs of study.

A post-hoc analysis was performed to evaluate the relative frequencies of the sex roles within the two occupational groups, traditional and nontraditional programs of study. Table 4 outlines these analyses.

Within the traditional programs of study there was a significant difference in the relative frequency of masculine, feminine, androgynous, and undifferentiated women studying developmental psychology and counseling psychology, $X2(3)=7.85$, $p<.05$. A chi square analysis of the distribution of feminine and androgynous subjects in counseling and developmental psychology was also significant, $X2(1)=4.92$, $p<.05$. There was a

greater number of feminine women in developmental psychology than in counseling psychology, and a greater number of androgynous women were in counseling psychology as opposed to developmental psychology.

In evaluating the nontraditional programs of study, engineering and law, no significnat difference was found in the distribution of the sex roles, X2(3)=3.17.

Hypothesis II

The following null hypothesis was tested:

> There is no significant difference in satisfaction ratings for individuals whose career choice is congruent to their sex role versus individuals who do not display congruence.

A series of t-tests of independent means were carried ou to investigate this hypothesis. The tests were run on four different modesl: 1) sex roles and satisfaction across the traditional and nontraditional programs; 2) congruence within the traditional and nontraditional programs; 3) congruence between the traditional and nontraditional groups; and 4) congruence of only sex-typed individuals between the traditional and nontraditional programs.

An investigation of sex roles and satisfaction across tradtional and nontraditional groups revealed no significant differences: masculine, t(21)=.84; feminine, t(38)=.18; androgynous, t(29)=1.29; and undifferentiated, t(15)=.60. See Table 5. There are no significant mean differences within any of the four sex role groups in traditional and nontraditional programs.

An investigation of the congruence of sex role and occupational choice within the traditional and nontraditional programs revealed inconsistent findings. See Table 6. In the traditional programs there was no significant mean difference in satisfaction ratings for individuals displaying congruence, those with feminine or androgynous sex roles, and individuals who do not

display congruence, those with masculine or undifferentiated sex roles, $t(63)=.004$. In the nontraditional programs there was a significant mean difference in satisfaction ratings for individuals displaying congruence, those with masculine and androgynous sex roles, and individuals who do not display congruence, those with feminine and undifferentiated sex roles, $t(44)=1.80$, $p<.05$.

A t-test of independent means was performed to evaluate the mean difference in satisfaction ratings of all individuals who display congruence of sex role and program (nontraditional: masculine and androgynous; traditional: feminine and androgynous) and those who do not display congruence of sex role and program (nontraditional: feminine and undifferentiated; traditional: masculine and undifferentiated). See Table 7. The test revelaed no significant mean difference, $t(109)=1.03$.

An investigation of sex-typed individuals who display congruence (traditional: feminine; nontraditional: masculine) and all other individuals (traditional: masculine, androgynous, undifferentiated; nontraditional: feminine, androgynous, undifferentiated) was performed using a t-test of independent means. See Table 8. There was no significant difference in mean ratings of satisfaction between the two groups, $t(109)=.78$.

In sum, several analyses were performed to determine whether there is a significant mean difference in satisfaction ratings for individuals displaying congruence of sex role and career choice. The null hypothesis states there will be no significant difference. The results obtained do not allow for rejection of the null hypothesis as only one t-test yields a significant mean difference in satisfaction ratings between individuals displaying congruence and those who do not, $t(44)=1.80$, $p<.05$. See Table 6.

Hypothesis III

The following null hypothesis was tested:

> There is no significant difference in satisfaction ratings among individuals classified as undifferentiated, feminine, androgynous, or masculine in either the traditional or nontraditional programs.

Several t-tests and analysis of variance tests were performed to investigate this hypothesis. These tests were run on three different models: 1) the individual sex roles (masculine, feminine, androgynous, and undifferentiated) and mean satisfaction across the sample; 2) sex roles and satisfaction as commonly grouped (masculinity and androgyny; feminity and undifferentiation); and 3) sex roles within and across the four academic p;rograms (developmental psychology, counseling psychology, engineering, and law).

To determine if there is a significnat difference in mean satisfaction ratings between the sex roles; masculine, feminine, androgynous, and undifferentiated, an analysis of variance was performed. See Table 9. The results indicated the lack of a significant effect of sex roles on satisfaction, $F(3, 108)j=.73$.

The difference in mean satisfaction ratings was investigasted using a t-test of independent means with subjects groupsed as in previous literature. See Table 10. Masculine and androgynous individuals comprised one group, and feminine and undifferentiated individuals made up another group. Results indicated a significnat difference in mean satisfaction ratings, $t(109)=1.75$, $p<.05$.

Analyses were performed to evaluate mean satisfaction and sex roles across and between the four academic programs. See Table 11. Two different

areas were considered. First, differences in mean satisfaction of the four sex role categories within each academic program (developmental psychology, counseling psychology, engineering, and law) and within the occupational groups (traditional and nontraditional) were investigated. Second, mean differences in satisfaction ratings across academic programs and occupational groups were considered for each sex role category.

Differences in mean satisfaction of the four sex role categories within each academic program and within the occupational groups were investigated using analysis of variance tests. There was no significant difference in mean satisfaction ratings in the four sex role categories within the occupational groups: traditional $F(3,62)=.13$; nontraditional $F(3,43)=1.64$. Significant mean differences were not revealed within any of the academic programs: developmental psychology $F(3,28)=1.28$; counseling psychology $F(3,31)=1.17$; engineering $F(3.16)=3.01$; and law $F(3,24)=1.34$.

Analysis of variance tests were performed to assess mean differences in satisfaction ratings across all academic programs, and t-tests were utilized to identify mean differences in satisfaction ratings across occupational groups. No significant mean differences in satisfaction ratings across academic programs were revealed: masculine $F(3,20)=.47$; feminine $F(3.37)=2.34$; androgynous $F(3,28)=2.68$; undifferentiated $F(3,14)=1.01$. T-tests revealed inconsistent findings across occupational groups. Within the traditional group, the feminine and androgynous sex roles revealed significant mean differences across the developmental and counseling psychology programs: Feminine $t(24)=2.87$, $p<.01$; Androgynous $t(24)=2.29$, $p<.01$. Masculine and undifferentiated sex roles did not display significant mean differences: masculine $t(1.31)=.51$; undifferentiated $t(2)=1.27$. Within the nontraditional group, the feminine sex role revealed a significant difference in mean

satisfaction ratings across the engineering and law programs, $t(12)=2.10$, $p<.10$. Other sex roles within the nontraditional programs do not display significant mean differences: masculine $t(14)=1.04$; undifferentiated $t(9)=.90$. The androgynous sex role did not have a sufficient number of subjects to allow for analysis as engineering only had one androgynous subject.

In sum, several analyses were performed to test the null hypothesis that there is no significant difference in satisfaction ratings among individuals within the various sex role groups. Results lead to the rejection of the null hypothesis as several tests revealed significant differences in the mean satisfaction of masculine, femine, androgynous, and undifferentiated individuals in traditional and nontraditional programs.

Summary

Statistical analysis lead to the rejection of two of the three null hypotheses. Hypothesis I was rejected. Analysis revealed that there is a significant difference in the relative frequency of masculine, feminine, androgynous, and undifferentiated sex roles for women in traditional and nontraditional programs of study. Masculine and undifferentiated women were represented significantly more in the traditional programs. Within the traditional program, significantly more feminine women were in developmental psychology while significantly more androgynous women were in counseling psychology. There were no significant frequency differences within the nontraditional programs.

Statistical analysis of Hypothesis II did not lead to rejection. There is no significant difference in satisfaction ratings for individuals whose career choice is congruent to their sex role versus individuals who do not display congruence. Four models were analyzed. Yet, only one model, congruence within the traditional and nontraditional programs, yielded significant

results. Within the traditional programs there were no significnat findings, but within the nontraditional programs, there was a significant difference between individuals displaying congruence and those who do not.

Analysis of null Hypothesis III lead to rejection. There is a significant difference in satisfaction ratings among individuals classified as masculine, feminine, androgynous, and undifferentiated in either the traditional or nontraditional programs. Three models were evaluated; two revealed significant findings. Analysis of sex roles and satisfaction as commonly grouped revealed a significant mean difference in satisfaction ratings for the masculine-androgynous group as opposed to the feminine-undifferentiated group. Analysis of sex roles within and across the four academic programs revealed significant differences which vary by traditionality. Within the traditional programs, feminine and androgynous individuals display a significant mean difference in satisfaction ratings across the developmental and counseling psychology programs. Within the nontraditional programs, feminine individuals display a significant mean difference in satisfaction ratings across law and engineering.

In conclusion, statistical analysis lead to the rejection of Hypothesis I and Hypothesis III while results did not allow for the rejection of Hypothesis II.

DISCUSSION

The early 1970's represent the first time the segregation of the work force, placing women in traditionally feminine occupations and men in traditionally masculine occupations and men in traditionally masculine occupations, began to be questioned. Sex roles and sex role stereotyping became feverishly researched topics. The status quo was investigated with zest as researchers recognized the "dysfunctional" division of the work force.

Women's sex roles became an area of intense interest as investigators theorized that sex role could have a relationsh to occupational choice and the perpetuation of the segregated work force. Current research concerning women's sex roles and careers focuses largely on undergraduate students (Stockton et al., 1980; Yanico et al., 1978; Harren et al.; 1978) Moreland, et al., 1979; Millard et al., 1984). The purpose of this study was to investigate women's sex roles and career choices with a graduate student population committed to their career choice.

A review of the literature brings forth three areas of primary interest: sex roles and adjustment: sex roles and career choice: and sex roles and the career decision process.

Research investigating sex roles and adjustment tended to empirically support the masculinity model (Whitley, 1984; Lubinsky et al., 1983; Orlofsky & O'Heron, 1987) though other models have been outlined such as the congruence model (Kagan, 1964; Kohlberg, 1964) and the model of androgyny (Bem, 1975; Jones & Lampke, 1985). Studies investigating career choice consistently found sex role to be a moderating variable with more influence for fremales than for males. Masculinity was found to be an indicator of a male dominated major regardless of gender (Stockton et al., 1980; Yanico et al., 1978; Harren et al., 1979). Androgynous females tend to be equally distributed among male and female dominated majors while feminine and undifferentiated sex roles were less descriptive of occupational choice.

Research investigating sex role and the career decision process described androgynous individuals as having the characteristics necessary to progress more rapidly through the career decision making process. (Harren et al., 1978; Moreland et al., 1979; Millard et al., 1984). The masculine sex role was found to have a neutral influence while the feminine and

undifferentiated sex roles may hampered prress through the decision-making process.

In this study a stotal of 111 womenb in four different graduate prrams (two of which were traditionally feminine and two of which were traditionally masculine) completed the Bem Sex Role Inventory, a nine-point Likert measure of satisfaction, and a demographic sheet. Fifty-eight percent of the sample represented students in traditional programs and 42% represented students in nontraditional programs. The mean age of the traditional sample (x=32.3) differed significantly from the mean age of the nontraditional sample (x=28.5). Six percent of the sample represented racial groups other than Caucasion.

The findings of this study (of a graduate population) both support and bring into question some of the current conclusions (based on undergraduate populations) concerning women's sex roles and careers. Two areas of significance are discussed: 1) satisfaction and sex roles and; 2) sex roles and career choice.

One of the most striking patterns observed in these data is the dominance of higher satisfaction of the masculine-androgynous group of individuals as oppopsed to the feminine-undifferentiated group of individuals across the traditional and nontraditional programs and within the nontraditional programms. Thus, the masculine-androgynous group within the nontraditional program was the only group for which congruence of sex role and prram was of significance.

Findings bring forth two possible explanations. First, is higher education, in general, better suited to individuals displaying masculine personality traits rather than those individuals who display predominately femine personality traits - with androgynous individuals having the

flexibility to apply situationally effective behavior regardless of the environment? The origin of higher education dates back to a period in history when the institution was run by males and served only male students. Of current, institutions of graduate education are serving more women student s and have more women in faculty and administrative positions. One must ask, though, what has been the influence of the increased involvement of women within these institutions? As professors, women in influential positions must have made it through the "masculine culture" of graduate education. m What may their sex role representation be? Are the attributes of masculine sex roles necessaray to find satisfaction within one's experience of graduate education? Apparently, the answer is yes.

A question that remains involves the masculin-androgynous group of women within the traditional program, the only area where the group did not have significantly higher levels of satisfaction. Two hypotheses emerge. First, the obvious is that this group is not as comportable in a traditionally feminine setting as the feminine-undifferentiated group. The problem here is that there was no significant difference in satisfaction ratings among these two groups. Second, graduate students in traditionally feminine, female dominated programs may be receiving a double message. ; The culture of a female dominated program conflicts with the inherent competitive environment of graduat education. Again, whata sex roles do women professors in these programs model to their female students? Ambivalence may be a result of conflicting messages leading to a greater range of satisfaction ratings within the traditional programs.

The second area of significance concerning sex role and satisfaction involves the career decision process. Research has consistently shown that masculine and androgynous individuals proceed more smoothly through the

career decision process. Research has consistently shown that masculine and androgynous individuals proceed more smoothly through the career decision process than feminine and undifferentiated individuals whose progress may actually be hampered by their sex role (Harren et al., 1978; Millard et al., 1984; Moreland et al., 1979). Results of this study along with previous findings could lead to the conclusion that masculine and androgynous women make more satisfying career decisions because they are able to progress through the career decision making process with less difficulty.

In sum, many women displaying masculine and androgynous sex roles as a group make more satisfying career decisions and when a less satisfying decision is made, these individuals are able to adjust their behavior and/or attitudes as they express significantly higher satisfaction than the feminine-undifferentiated group across the traditional and nontraditional progress. Within the traditional program, where one would expect the feminine-undifferentiated group to have higher ratings of satisfaction, the two groups do not display a significnat difference in satisfaction. These findings are consistent with general theories of sex role and adjustment which empirically describe androgynous and masculine women as consistently better adjusted then feminine and undifferentiated women (Orlofsky & O'Heron, 1987; Bem, 1975; Whitely, 1984; Jones & Lampke, 1985).

These findings regarding sex role and satisfaction lead credence to the lack of significance regarding congruence. It is possible that feminine and undifferentiated women never truly display congruence in graduate education, a nontraditional, male dominant environment. Therefore, masculine and androgynous women may always display congruence when in graduate education, the question may be one of degree. Those who can adjust

to he masculine environment will fit and therefore will be more satisfied with their career choice. Those who do not or cannot adjust will not fit.

The second area of significance regards sex role and career choice. Findings in this area, again, both support and contradict previous conclusions. Women with masculine and feminine sex roles tended to consistently be in nontraditional and traditional programs respectively Sex-typed individuals appear to offer more consistency than the androgynous and undifferentiated individuals. Literature has traditionally found androgynous individuals to be equally distributed across traditional and nontraditional prrams (Stockton et al., 1980; Yanico et al., 1978; Harren edt al., 1979). Findings of this study indicated that androgynous individuals were represented significantly more frequently in traditional programs rather than nontraditional. Results, indeed, pose a question as to whether there is a difference within undergraduate and graduate populations. Regarding the undifferentiated sex role, which previous research has not adequately addressed, these individuals were significantly more frequently represented in nontraditional programs.

In sum, from these findings it is evident that masculine and androgynous individuals are more satisfied with their career decisions regardless of their program or field of study, and sex-typed individuals (masculine or feminine) are significantly more likely to go into a program dominated by their sex type though this likelihood is not directly related to satisfaction.

Limitations

The central limitation of the present study is its focus on a student population. Recognition must be made, though, that research with a graduate student population is a beneficial step to aid in bridging the gap between the vast amount of research with undergraduate populations and the lack of

research with women emplopyed in their chosen career fields. Conclusions based on undergraduates' data have been contradictory. Contradictions may, in part, be due to the lack of investment undergraduates often have in their major as most change two or three times prior to graduation. A graduate student population represents mature adults have have made decisions which they are committed to.

Another limitation involves the size of the sample and the relatively few graduate programs which were investigated. Though this study will, indeed, braoden the scope of research on women's sex roles and career decisions, its limitations are still evident. It is not advisable to generalize these findings to the population at large.

Recommendations

Several recommendations for future research concerning women's sex roles and careers evolve from this study.

1) A replication of this study using a larger sample across a greater number of graduate programs.

2) A study investigating the sex roles of women professors involved in graduate education.

3) An investigation of the relationship between satisfaction and success within graduate programs.

4) A study investigating the environment of graduate education as perceived by both graduate students and graduate educators.

This study raises important questions concerning women's sex roles in graduate education as both students and educators. It is necessary that further research be undertaken as education is an important factor related to income and the future desegregation of the work force. Satisfying educational opportunities must be openend to women of all sex roles. Without support

both within and outside of education sex-typing of occupations will continue to occur, and women will remain the minority in graduate education, in higher paying jobs, and in influential positions within society.

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TABLE 1

PARTICIPANTS WITHIN EACH PROGRAM

PROGRAM	#CONTACTED	#PARTICIPATED	PERCENT
Engineering	31	19	61.3%
Law	49	27	55.1%
Develop. Psych	58	31	53.4%
Counseling Psych	50	34	68.0%

TABLE 2

DEMOGRAPHIC CHARACTERISTICS

PROGRAM	N	% OF SAMPLE	MEAN AGE	# OF SEMESTERS	RACE*
SAMPLE	100	100	30.5	7.2	6.0
TRAD.	65	58	32.3	8.2	6.0
D. PSY.	31	28	32.6	13.2	13.0
C.PSY.	34	30	32.0	3.2	0.0
N. TRAD.	46	42	28.5	5.6	6.5
ENGIN.	19	17	29.5	7.4	5.0
LAW	27	24	27.9	4.4	7.0

* % NOT CAUCASION

TABLE 3

DISTRIBUTION OF SEX ROLES BY OCCUPATIONAL GROUP

PROGRAM	MAS-%	FEM-%	ANROG-%	UN DIF-%	N	df	X2
TRADITIONAL	10.8	40.0	40.0	9.2			
	(N=7)	(N=26)	(N=26)	(N=6)	65		
NONTRADIT.	34.8	30.4	10.8	23.9	3		20.2
	(N=16)	(N=14)	(N=5)	(N=11)	46		

*P<.001

TABLE 4

DISTRIBUTION OF SEX ROLES BY TRADITIONALITY

PROGRAM	MAS-%	FEM-%	ANROG-%	UN DIF-%	N	df	X2
TRADITIONAL							
D.PSYCH	9.7	54.8	29.0	6.4			
	(N=3)	(N=17)	(N=9)	(N=2)	31		
C.PSYCH	11.8	26.5	50.0	11.7		3	7.8*
	(N=4)	(N=9)	(N=17)	(N=4)	34		
NONTRADITIONAL							
ENGIN.	42.1	21.1	5.2	31.6			
	(N=8)	(N=4)	(N=1)	(N=6)	19		
LAW	29.6	37.0	14.8	18.5		3	3.17
	(N=8)	(N=10)	(N=4)	(N=5)	27		

*P<.05

TABLE 5

SEX ROLES AND MEAN SATISFACTION
ACROSS TRADITIONAL AND NONTRADITIONAL PROGRAMS

SEX ROLE CATEGORY	TRADITIONAL	NONTRADITIONAL	t
MASCULINE			
n	7.0	16.0*	
M	6.29	6.78	.84
SD	1.47	.94	
FEMININE			
n	26.0*	14.0	
M	6.27	6.36	.18
SD	1.55	1.38	
ANDROGYNOUS			
n	26.0*	5.0*	
M	6.54	7.40	1.23
SD	1.44	1.04	
UNDIFFERENTIATED			
n	6.0	11.0	
M	6.5	5.91	.60
SD	1.98	1.73	

*Display Congruence

TABLE 6

CONGRUENCE WITHIN TRADITIONAL AND NONTRADITIONAL PROGRAMS AND MEAN SATISFACTION

PROGRAM	CONGRUENT SEX ROLES	INCONGRUENT SEX ROLES	t
TRADITIONAL	FEMININE & ANDRROGYNOUS	MASCULINE & UNDIFFERENTIATED	
n	52.0	13.0	
M	6.40	6.38	.004
SD	1.53	1.75	
NONTRADITIONAL	MASCULINE & ANDROGYNOUS	FEMININE & UNDIFFERENTIATED	
n	21.0	25.0	
M	6.9	6.16	1.80*
SD	1.05	1.57	

*p<.05

TABLE 7

CONGRUENCE BETWEEN TRADITIONAL AND NONTRADITIONAL GROUPS AND MEAN SATISFACTION

	CONGRUENT GROUP	INCONGRUENT GROUP	t
n	73.0	38.0	
M	6.55	6.24	1.03
SD	1.40	1.62	

TABLE 8

CONGRUENCE OF SEX TYPED INDIVIDUALS
AND ALL OTHERS AND MEAN SATISFACTION

	SEX TYPED CONGRUENT GROUP	ALL OTHERS	t
n	42.0	69.0	
M	6.45	6.38	.78
SD	1.40	1.56	

TABLE 9

SEX ROLES AND MEAN SATISFACTION

SEX ROLE	n	M	SD
MASCULINE	23	6.60	1.22
FEMININE	40	6.30	1.50
ANDROGYNOUS	31	6.68	1.41
UNDIFFERENTIATED	17	6.12	1.83

TABLE 10

GROUPED SEX ROLES AND MEAN SATISFACTION

SEX ROLE GROUP	N	M	SD	t
MASCULINE & ANDROGYNOUS	54	6.74	1.31	
FEMININE & UNDIFFERENTIAT.	57	6.25	1.60	

*p<.05.

TABLE 11

SEX ROLES WITHIN AND ACROSS THE ACADEMIC PROGRAMS AND OCCUPATIONAL GROUPS AND MEAN SATISFACTION

SEX ROLE	TRADITIONAL DEV.P..	COUN. P.	t	NONTRADITIONAL ENGIN.	LAW	t	F
MASCULINE							
n	3.0	4.0		8.0	8.0		
M	6.67	6.0	.51	6.6	6.87	1.04	.47
SD	1.87	1.0		1.35	.65		
FEMININE							
n	17.0	9.0		4.0	10.0		
M	6.65	5.5	2.87**	7.5	5.9	2.10*	2.34
SD	1.52	1.55		.50	1.37		
ANDROGYNOUS							
n	9.0	17.0		1.0	4.0		
M	7.3	5.88	2.29**	7	7.5	***	2.68
SD	1.26	1.61		0	1.25		
UNDIFFERENTIATED							
n	2.0	4.0		6.0	5.0		
M	5.0	7.25	1.27	5.50	6.40	.90	1.01
SD	2.0	1.48		.96	2.24		
	F=1.28	F=1.17		F=3.01	F=1.34		
	F=.13			F=1.64			

*p<.j10; **p<.01; *** not enough data